Australian Energy Regulator (AER)
Victorian Electricity Distribution Businesses
Access Arrangements 2016-20
Preliminary Decisions

Public Forum, Melbourne – Tuesday 17 November 2015

Presentation by AER's Consumer Challenge Panel (CCP) sub-panel 3

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AGENDA

- Role of the Consumer Challenge Panel (CCP)
- Consumer engagement
- Forecasting maximum demands
- Rate of return
- Operating expenditure (opex)
- Benchmarking
- Capital expenditure (capex)
- Incentives and reliability

Section 1

Role of the CCP, consumer engagement, and forecasting maximum demands

Role of the Consumer Challenge Panel

- Challenge the businesses and the AER
- Review documentation
- Meet with the AER and the network businesses
- Meet with individual customer representatives
- Attend consumer engagement activities initiated by the networks
- Tour some network facilities
- Provide formal published advice to the AER
- Discuss issues with AER staff and AER Board

Consumer engagement

Our Advice to the AER

- The consumer engagement undertaken by the DNSPs raised many issues with the effectiveness of the DNSPs' consumer engagement activities
  - We detailed those issues in our advice
- Consumer engagement can provide some guidance to a DNSP, but cannot be deterministic, due to the many issues that surround the various approaches that are being used

Consumer engagement

The AER's Preliminary Decisions (1)

- We consider that <business> has taken important [initial] steps to involving consumers in the regulatory process
- VECUA[, CUAC] and the Consumer Challenge Panel indicated there are further opportunities for <business> to improve the way it objectively seeks consumer feedback [in developing its regulatory proposal]
- We expect <business> to consider these submissions in developing its consumer engagement program[s] going forward

Consumer engagement

The AER's Preliminary Decisions (2)

- CUAC identified CitiPower and Powercor could be more accessible to consumer representatives
- Stakeholder comments that Jemena's and United Energy's consumer engagement was meaningful and genuine is encouraging

Consumer engagement

Our summary

- Network businesses have made considerable progress on consumer engagement
- There is more work to be done (nationally) to improve consumer engagement and move to best practice
- There is more to consumer engagement than influencing regulatory proposals and regulatory decisions
- Perhaps there is a need for more clarity on how consumer engagement does affect regulatory decisions
- What is the value of consumer engagement for consumers?

Forecasting maximum demands (1)

- In recent years, for each DNSP the maximum demand was over forecast in all cases
- Over the past few years, AEMO has consistently revised downwards its forecast peak demands, increasing concerns about peak energy demand forecasts
- We advised that the AER should pay particular attention to the DNSPs' maximum demand forecasts and whether they had been over-estimated

Forecasting maximum demands (2)

AER:

- The available evidence suggests that maximum demand will remain generally flat over the 2016–20 period, which is consistent with the Australian Energy Market Operator's (AEMO) independent forecasts for <each> network

Missing the Boat?

Section 2: Rate of return, and operating expenditure

The big questions…

- My presentation today will focus on two key topics:
  - Rate of return on assets
  - Operating expenditure
- Does the AER's PD allow only the prudent and efficient costs of providing the network services?
- Does the AER's PD adequately address issues raised in the 2012 rule reform process?
- If not – why not?

Rate of Return (RoR)

- Widespread dissatisfaction with outcomes of the AER's determinations & Tribunal's decisions from 2009 to 2011
- AEMC 2012 Rule changes require the AER to develop a RoR Guideline
  - Addresses concerns of networks on need for more certainty on how AER will use its discretion
  - Developed over period of 12 months and involved considerable consultation with all stakeholders
  - Guideline not mandatory, but need good reasons to vary from it
- Networks' proposals include significant variations from Guideline
- CCP3 view:
  - The networks' case to vary from the Guidelines is not convincing:
    - Minimal consultation with other stakeholders re proposed variations
    - Inadequate justification for the alternative "experimental" approaches
    - The RoR is significantly higher than the AER's outcome
    - These outcomes are not consistent with current market conditions for funds
  - The AER's PD is preferable – but still, essentially conservative
    - Outcomes are minimally different as compared to outcomes under previous rules, once you account for reduced interest rates

Why does CCP think AER's RoR is "conservative"

- Inputs are conservative:
  - "benchmark" efficient business is narrowly defined and does not reflect current practice, e.g.
    - Assumes all debt and equity raised in Australia
  - Debt to equity ratio (60/40) is lower than average network business
  - Applies a long-term interest rate/bond rate (10 years) which is higher cost than reasonable alternatives (5-7 years)
  - Uses "BBB" credit rating data (rather than benchmark BBB+)
- Point estimates at the higher end of feasible range:
  - Market risk premium
  - Equity beta
  - Places some "weight" to alternative equity models
  - Ignores evidence of high levels of profitability
- Does this point to a need to further amend the RoR Guideline &/or the Rules?

Rate of Return – cost of equity is main issue

	AusNet %	CitiPower %	Powercor %	Jemena %	United Energy %	AER PD (Oct 2015) %
Overall WACC	7.19	7.20	7.20	7.18	7.38	6.02–6.12
Return on Equity	9.90	9.90	9.90	9.87	9.95	7.3
Return on debt	5.39	5.39	5.39	5.39	5.67	5.16–5.33
Equity risk premium	7.26	7.26	7.26	7.23	7.31	4.55 *[ERP in 2010 was 5.2]*

Notes:
WACC= Weighted average cost of capital (60% debt/40% equity)
Equity Risk Premium (ERP) = [Return on equity – risk free rate]
Risk Free Rate (RFR) = interest rate on Commonwealth Government 10 year bonds

The networks approach to equity: multi-model assessment

Equity Model Type	Return on Equity %	Weighting (exc Jem) %	Weighting (Jem) %	AER approach (Oct 2015)
S-L CAPM	9.32	12.5	25.0	7.3
Black CAPM	9.93	25.0	25.0	Impact on Beta (β) ↑
Fama-French	9.93	37.5	25.0	No impact
Dividend Growth	10.32	25.0	25.0	Impact on MRP ↑
Return on Equity		**9.90-9.95**	**9.87**	7.3

Risk Free Rate: DNSP=2.64%/AER = 2.76%

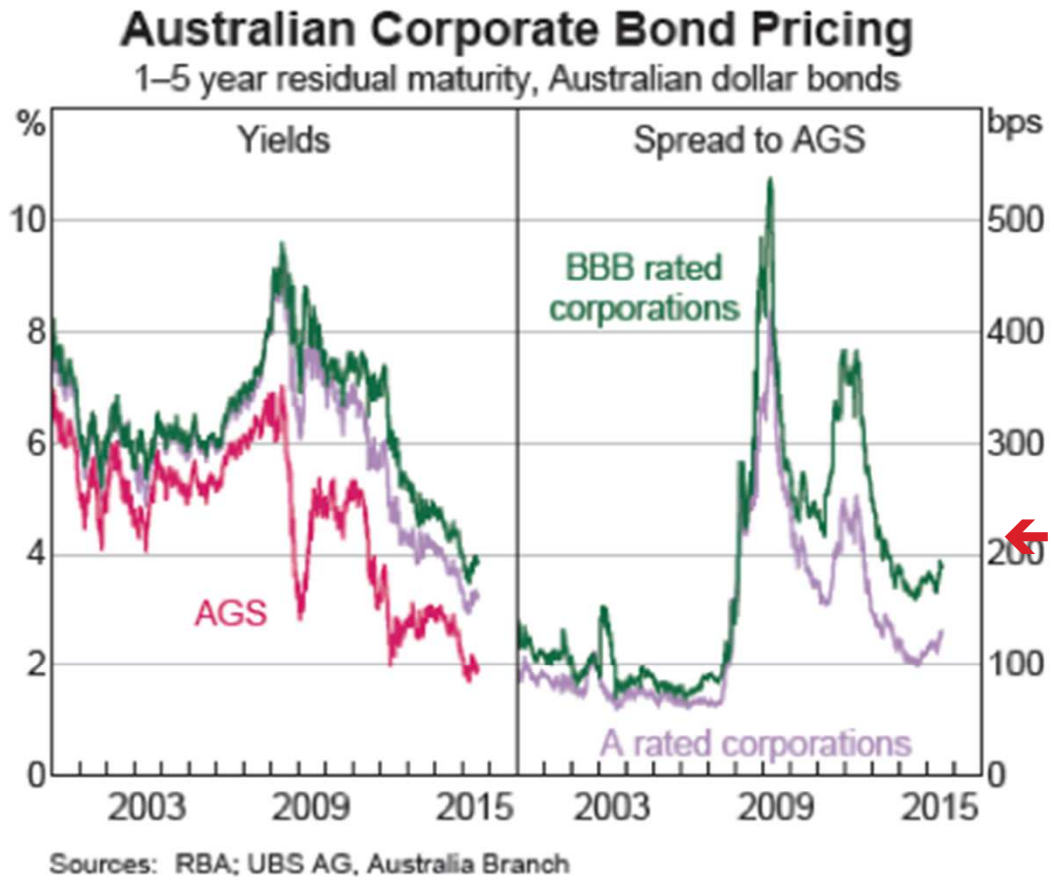
Equity beta (β): Summary of AER's consultant's "preferred" outcomes

	Table 2		Table 14		Table 16	
	Average	**Median**	**Average**	**Median**	**Average**	**Median**
Ordinary Least Squares	0.52	0.44	0.47	0.48	0.49	0.44
Least Absolute Deviation	0.33	0.32	0.46	0.46	0.50	0.46

Source: Henry, O. T., "Estimating **β:** An update", April 2014, Tables 2, 14 & 16. CCP3 analysis.

AER's conclusion: 0.7
DNSP's proposal: 0.82 – 0.89
CCP's recommendation: 0.5 – 0.55

AER's debt risk premium also conservative given market conditions



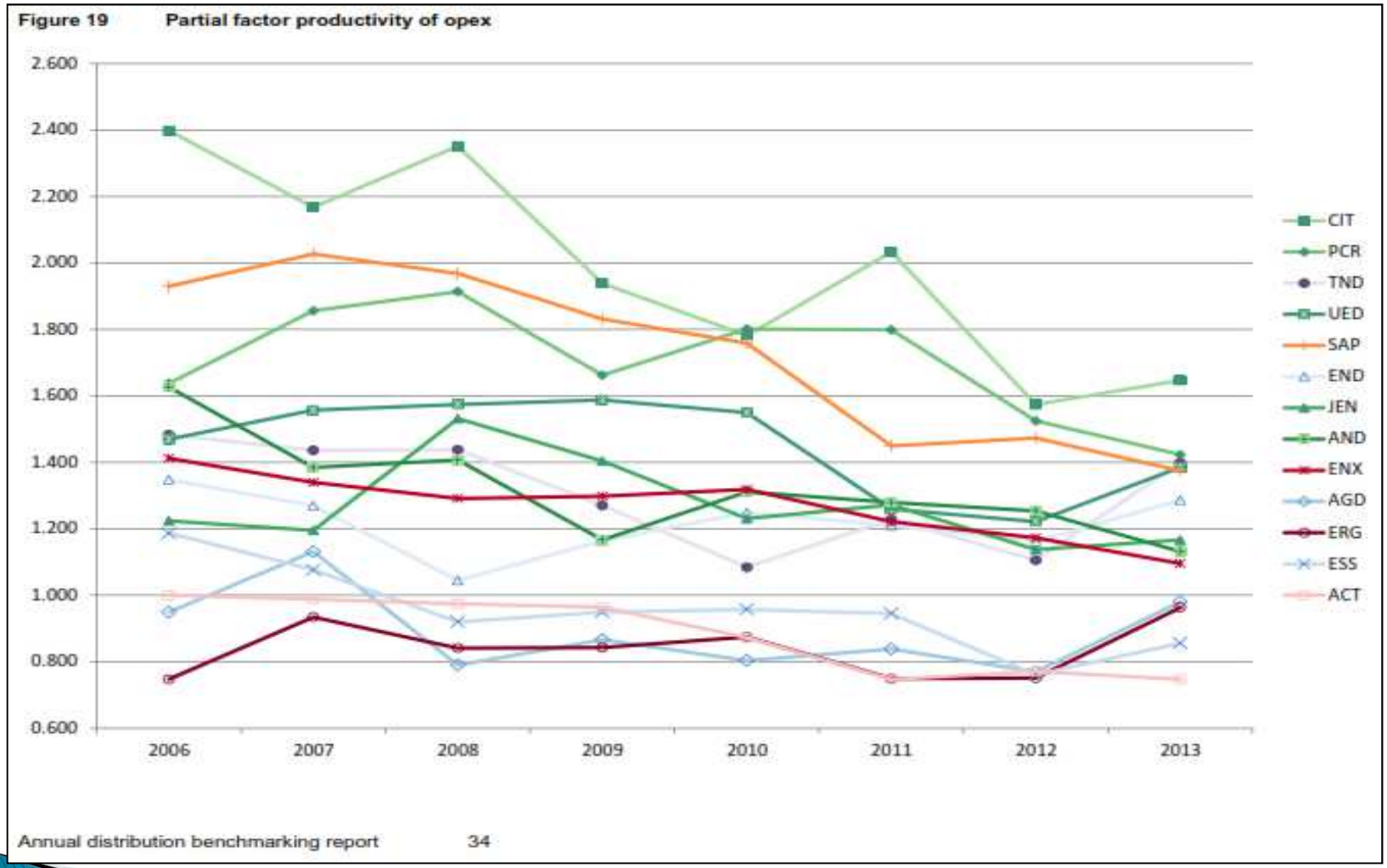
AER 2015 PD:
Debt risk premium approx 2.4%; compared to 2011 DRP of 3.7%

Source: RBA, *Statement of monetary policy*, August 2015, p. 53.

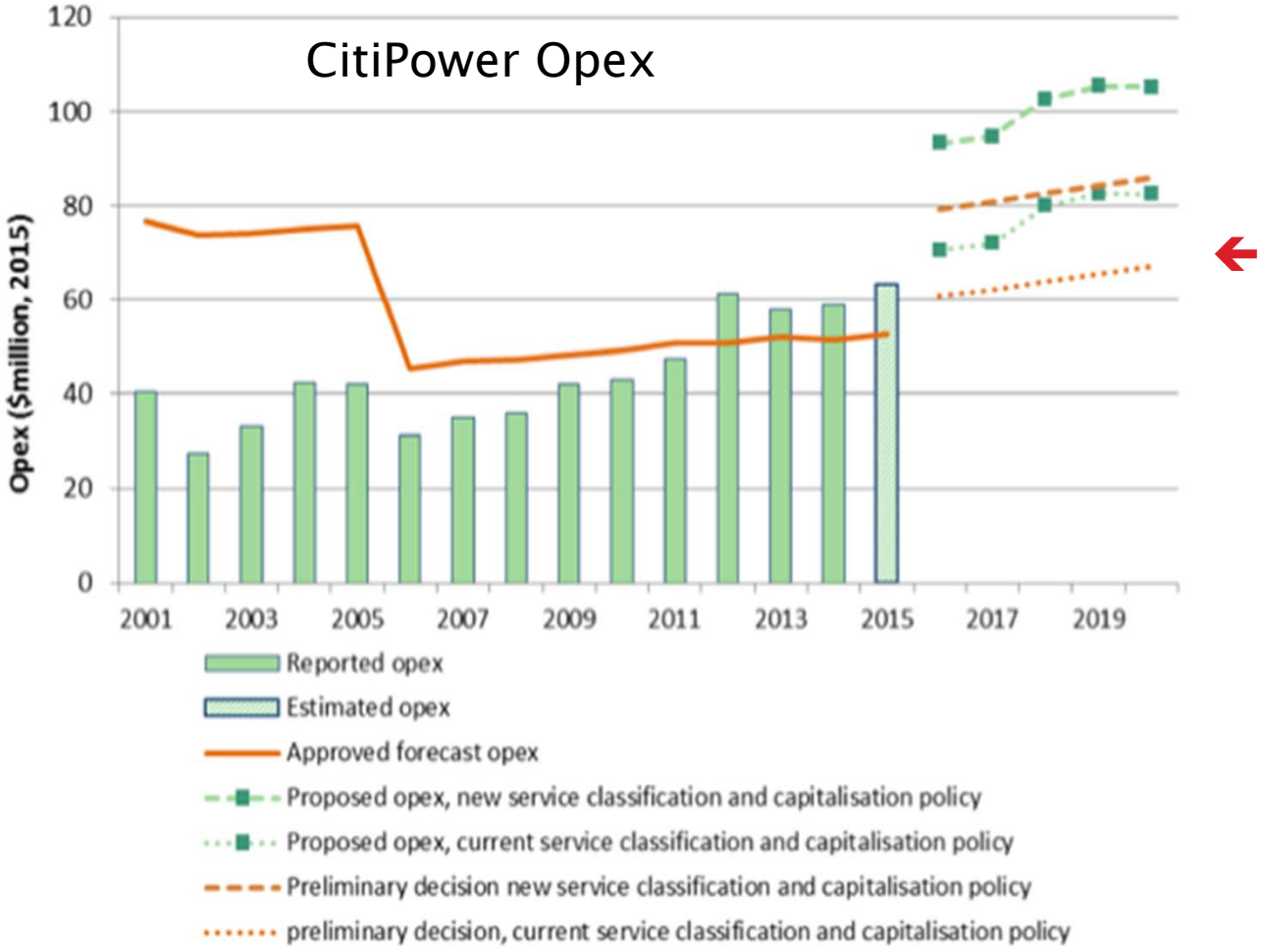
Assessment of Operating Costs (opex)

- The AER has reduced overall opex compared to DNSPs' proposals ($million 2015) by average 14.6%
  - Total DNSP = $4,371
  - Total AER = $3,731
- However, total opex allowance (in real $) still increases compared to previous regulatory period;
- The AER's PD:
  - AER's PD "locks in" productivity decline since 2006
  - Assumes DNSP opex is at efficient levels in 2014
  - Argues that the regulatory incentive mechanisms ensure 2013 efficient & future improvements in efficiency
  - Fails to align regulatory outcomes with "competitive market" outcomes & overall economic trends

Locks in productivity decline since 2006…



Assumes 2014 opex is at efficient level: Example from CitiPower…



Does the EBSS provide an incentive?

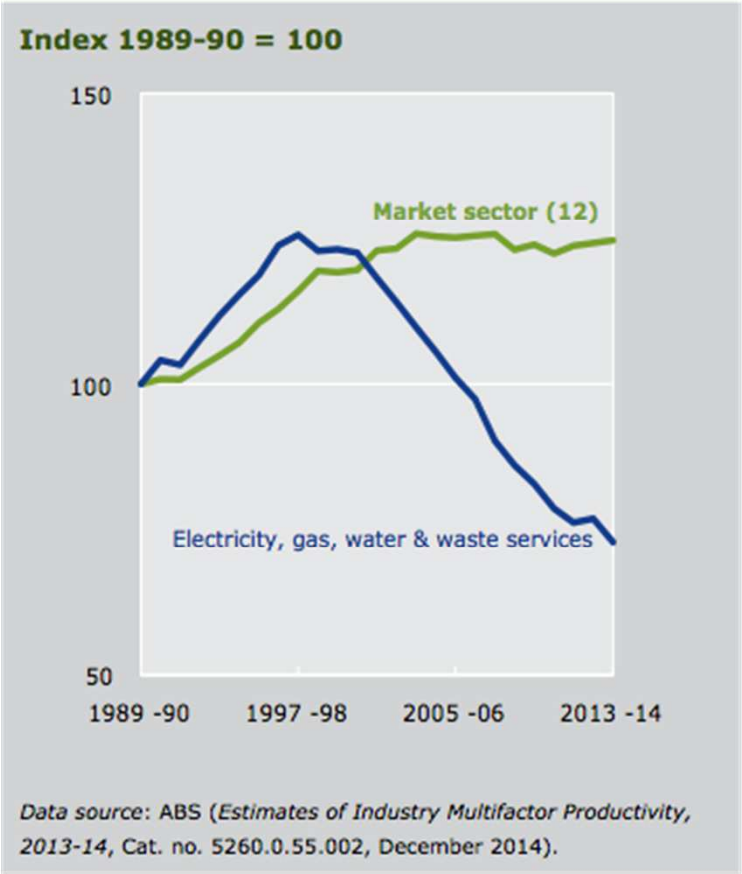
EBSS:	2016	2017	2018	2019	2020	Total	% F/c revenue
AusNet	17.0	-9.1	-7.2	13.2	-	14.0	0.5%
CitiPower	-0.1	-2.7	1.0	-1.3	-	-3.1	-0.2%
Jemena	5.0	-0.1	11.3	8.8	-	24.9	2.1%
Powercor	12.5	-3.2	2.5	9.8	-	21.6	0.7%
United Energy	-12	18.6	7.5	10.7	-	24.7	1.3%

Notes:

- EBSS payments as per the AER's PD for each network
- EBSS payments are for actual against allowed in previous regulatory period ($m 2015) ,
- F/C revenue is AER's allowed total revenue for 2016-20 (in $m nominal)

Does AER's approach reflect current competitive market & policy imperatives?

Figure 1.8
MFP in Utilities, 1989-90 to 2013-14



Data source: ABS (*Estimates of Industry Multifactor Productivity, 2013-14*, Cat. no. 5260.0.55.002, December 2014).

Source: Productivity Commission, *Productivity Update*, July 2015, p 21

Opex – summary

Forecast Component	Vic Networks proposals (overview)	AER Preliminary Determination	CCP Initial Comments
Base Year	Accept 2014 as base year with no efficiency adjustment (as occurred for NSW and Qld)	Accept 2014 as base year with no efficiency adjustment	Benchmarking study reveals significant declines over 2006–2013 in efficiency measures. AER should examine 2014 in light of this
Trend	Proposing cost increases above CPI Significant output growth No productivity growth (except Jem)	AER rejects proposed price increases (labour & materials) & output growth forecasts – allows above CPI for labour costs AER does not apply productivity growth factor	Largely agree with AER re price increases & output growth, although +CPI growth in labour costs needs investigation Strongly disagree with productivity set at zero
Step Changes	Significant step changes for bushfire management & insurance Consumer engagement & DMIA driving other changes	AER rejects most step changes AER rejects proposals by all DNSPs to allocate some smart meter opex to standard control services (27% – 79%)	CCP generally agrees with AER, but consider that overhead cost allocation still an issue that must be sorted Lack of clarity on Govt policy also an ongoing issue
Overall	Significant increases in opex over 2011–15: 25% (UE), 31% (Jem), 35%,(AusN) 44% (P'cor), 75% (C/Power)	AER rejects significant increases But does allow for real dollar increases in opex over regulatory period	The $real increases in opex do not seem justified given the static condition of the market. Changes in cost allocation & service classification make assessment more difficult. Impact on future efficiency?

Does the AER's PD miss the boat?

- CCP considers:
  - The AER's PD provides a much better outcome for consumers than the DNSPs' proposals
  - However, the AER's position is still essentially a conservative position. The PD:
    - Limits growth in expenditure – and so it should given demand!
    - But does not reel back the significant increases of the past period
    - "Locks in" lower productivity and higher costs
    - Exposes consumers to risk of future price increases
- Why?
  - Limits of the Rules (even the modified Rules)
  - Concern about the Australian Competition Tribunal's decisions
  - Adversarial and legalistic regulatory process
  - Lack of policy clarity from Jurisdictional and national government
  - Lack of overriding economic and policy objective
  - AER's approach & underlying assumptions are inherently conservative
- So what's next for consumers…

Section 3

Benchmarking, capital expenditure, and incentives and reliability

Benchmarking

- The Victorian networks have been exposed to an incentive on opex since 2001. This leads to an assumption that the DBs will be reasonably efficient
- However, what is concerning is that the productivity of the DBs has generally been falling over time.
- There are some reasons for this (eg increased regulatory requirements) and the average loss of DB productivity is a weighted average of ~3% pa across the NEM
- Other than JEN, all Vic DBs rate of loss is higher than the NEM average with CitiPower rate of loss ~11% pa
- This raises the concern that the current opex might not be efficient, but specifically CitiPower opex is unlikely to be efficient

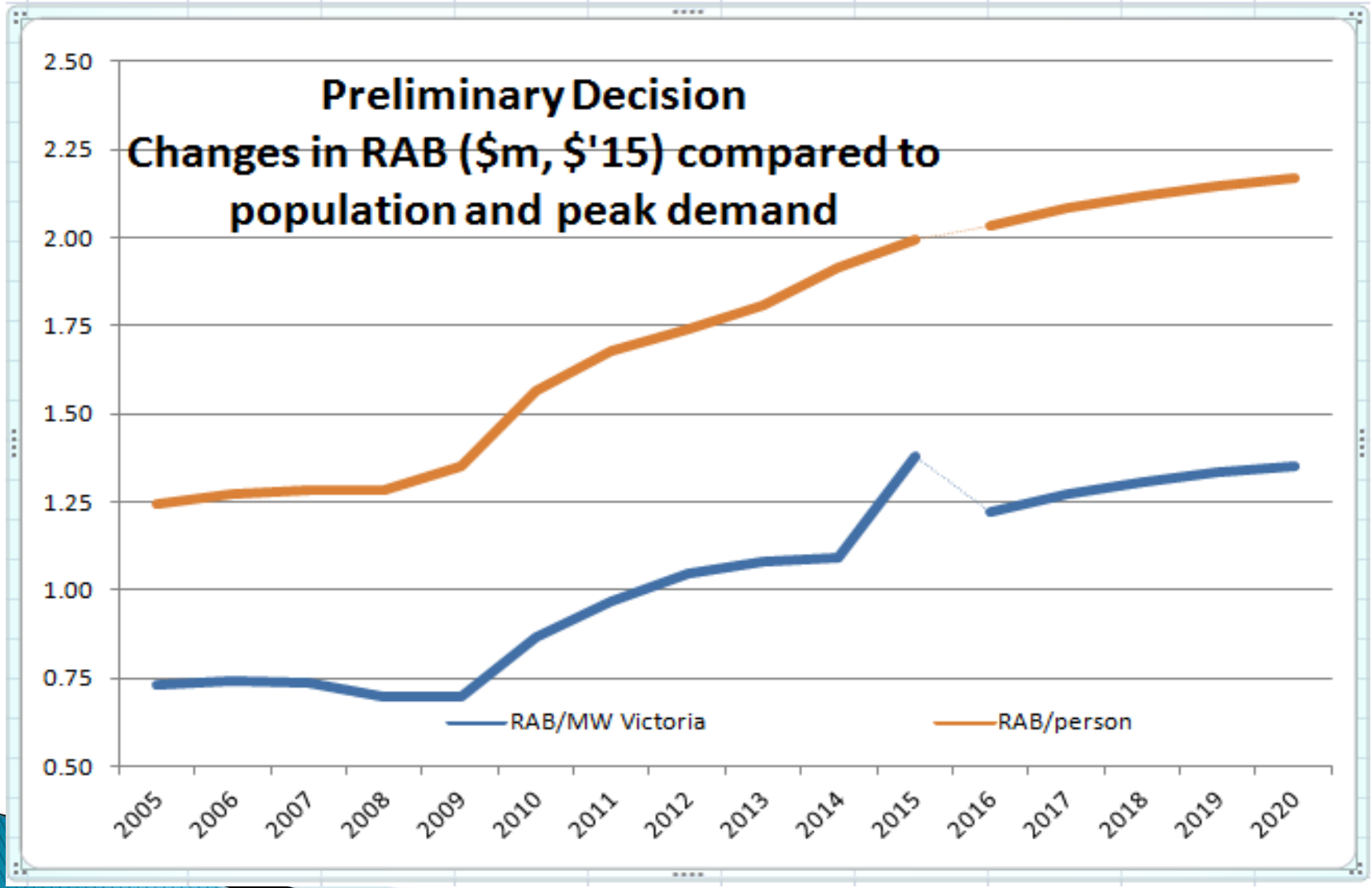
Capital expenditure (capex)

Some general observations

- In our view of the capex proposed by the DBs, we were critical of the amounts of capex sought
- We need to be mindful of decisions made today that impact future consumers
- Yet neither the DBs nor the AER in its preliminary decisions recognises this impact
- There are models used to identify expected needs in capex
- Yet there is inconsistency in the data used in the various models with regard to asset lives which impact repex and depreciation.

Capital expenditure (capex)

Note: VBRC capex accounts for ~2% of total RAB



Capital expenditure (capex)

Some general observations

- Capex has the greatest impact on the growth of the RAB
- Intuitively, the growth seen in the past relative to need is not sustainable – the stability on RAB to need generated under the Electricity Code is striking
- The current low levels of WACC are generating a false sense of security with regard to pricing and a return to levels of WACC based on the long term average of the risk free rate will be stark
- It is important now to stop the RAB growing, so that future consumers are not driven further away from using network assets

Capital expenditure (augex)

Some general observations

- Capex in the past has been driven by augex
- Yet in the forecast period,
  - The Victorian wide expected peak demand will be less than that recorded in 2009
  - AEMO has identified that VCR is lower than in the past
  - Average utilisation of assets is already low and falling
- On this basis no augex should be needed
- Overall, the DBs proposed a net increase in augex of $26m from the current period of $1187m.
- The AER suggests that "only" $847m of augex is needed, a reduction of ~30% from current levels
- Despite the reduction proposed, it could still be surmised that the AER has overstated the need for augex

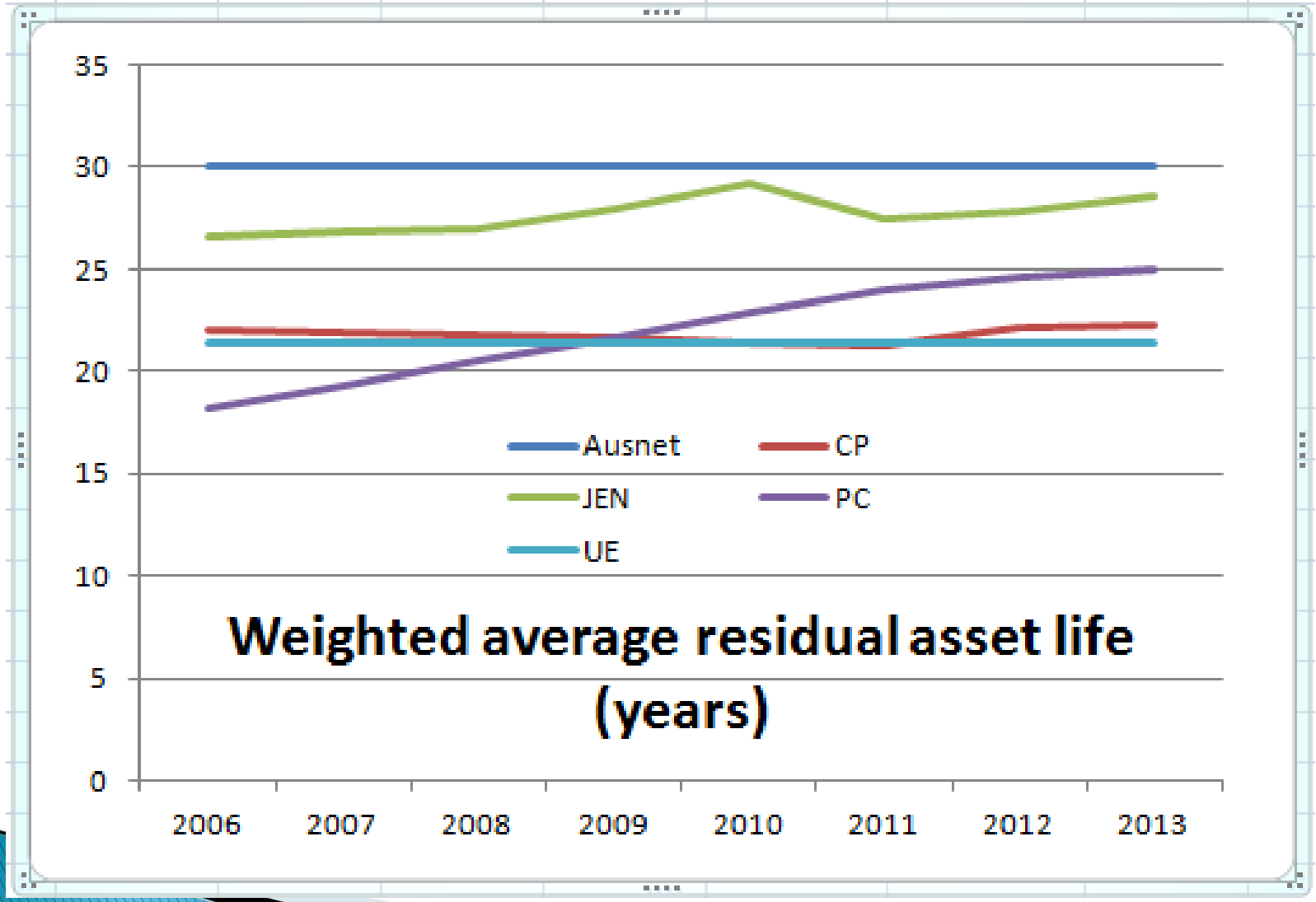
Capital expenditure (repex)

Some general observations

- Capex in the past has been driven by augex, but is now driven by repex
- It is a NEM wide issue that DBs are now seeking repex increases, well above their previous levels claimed for repex
- What is different now from previous levels that has resulted in increased age of assets or condition of assets
- Currently, on a weighted average basis, DB assets have more than half their expected lives remaining (based on RIN data)
- On this basis, no increase in repex should be needed

Capital expenditure (repex)

ex RIN data



Capital expenditure (repex)

Some specific observations

- Overall, the DBs proposed a net increase in repex of $840m from actual expenditure in the current period of $1854m, ~45% increase.
- The AER suggests that "only" $2039m of repex is needed, an increase of ~10% from current levels
- The current actual level of repex reflects an overspend by the DBs by perhaps 30% in the current period based on (reliability / quality / maintenance) plus (environment / safety / legal) allowances provided in 2010
- It would appear that the AER has overstated the need for repex

Capital expenditure (asset lives)

Some general observations

- There are three sets of asset lives data provided (RIN data, repex model, PTRM) and all are different
- The repex model implies that it uses actual replacement data from the category analysis
- Yet examination of the data shows some significant anomalies between repex, PTRM and RIN asset life data
- There is some consistency between the PTRM and RIN data, but anomalies exist as identified by CCP3 earlier

Capital expenditure (asset lives for repex)

Asset	Type	Replacement life
POLES	> 1 KV & < = 11 KV; WOOD	69.8
	> 1 KV & < = 11 KV; CONCRETE	47.7
	> 1 KV & < = 11 KV; STEEL	44.8
	> 11 KV & < = 22 KV; WOOD	64.7
	> 11 KV & < = 22 KV; CONCRETE	43.2
	> 11 KV & < = 22 KV; STEEL	15.4
	> 22 KV & < = 66 KV; WOOD	63.5
	> 22 KV & < = 66 KV; CONCRETE	45.1
	> 22 KV & < = 66 KV; STEEL	10.3

Capital expenditure (asset lives for repex)

Asset	Type	Replacement life
SWITCHGEAR	< = 11 KV ; SWITCH	64.3
	> 11 KV & < = 22 KV ; SWITCH	68.3
	> 22 KV & < = 33 KV ; SWITCH	57.2
	> 33 KV & < = 66 KV ; SWITCH	65.5
	> 66 KV & < = 132 KV ; SWITCH	40.3
TRANSFORMERS	POLE MOUNTED ; < = 60 KVA	56.4
<=22kV, multiphase	POLE MOUNTED ; > 60 KVA AND < = 600 KVA	53.1
	POLE MOUNTED ; > 600 KVA	40.4

Depreciation (asset lives)

- As part of the PTRM, the assets are depreciated and an allowance developed to recover the capital previously provided.
- The shorter the asset life the greater the amount paid by consumers in that DB's area for the services. This is particularly important when networks are seeking accelerated depreciation
- The rate of depreciation of similar assets should be the same across all DBs yet there is significant variation
- There needs to be consistency between PTRM and RIN data, and between all DBs.

Depreciation (asset lives)

range in asset lives between DBs	PTRM	RIN
Distribution	36 to 51	36 to 63
Subtransmission	45 to 60	49 to 61
SCADA control	7 to 13	
IT	5 to 6	
Non network other long /short	5 to 24	5 to 64, 5 to 12
Distrib S/S		36 to 62
Zone S/S		39 to 60

Incentives and reliability

- The STPIS, EBSS and CESS are designed to work together
- There is an incentive for the DBs to maximise their capex for 2016-20, as the CESS will provide an unearned benefit when/if the DBs under-run the capex allowance
- There has been a reduction in VCR and the historic levels of repex have resulted in high levels of reliability and low levels of USE
- With minimal change in demand, significant spare capacity and more augex, reliability should increase giving an unearned benefit

THANK YOU